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BRIEF19

A daily review of covid-19 research and policy

RESEARCH BRIEFING

Regeneron's antibody cocktail shows promise in the lab, but little difference for patients.

Ever since President Donald Trump was treated with Regeneron's famed antibody cocktail to treat his coronavirus infection, the scientific community has eagerly awaited results of its trial data. This past week, [The New England Journal of Medicine](#) published Regeneron's preliminary findings for 275 patients who received the REGN-COV2 "neutralizing" antibody cocktail. The cocktail is comprised of antibodies that can bind to parts of the surface of SARS-CoV-2.

The trial divided patients into three groups—placebo, low dose (2.4 grams) and high-dose (8.0 grams) REGN-COV2—and studied two main outcomes: viral clearance and avoidance of healthcare visits (a proxy for progression of disease).

The population studied was young, albeit diverse. The high dose regimen demonstrated clinically significant reduction in viral load for a subset of the subjects. Prior to the administering of REGN-COV2 or placebo, researchers measured the concentration of antibodies that each test subject already had in their bloodstreams. Interestingly, only those patients who started out *without very low amounts of preformed antibodies* showed a meaningful response to the drug. Those who already had a prior infection and whose immune systems had started fighting SARS-CoV-2 adequately (i.e. had higher amounts of preformed antibodies) did not have a statistically decreased viral load compared to those in the placebo group. The authors theorize that those who already had an antibody response to covid-19 were effectively clearing the virus by themselves, while those without antibodies received a beneficial effect from the antibody cocktail.

Regarding the data on recurrent healthcare visits, one of the more clinically important measures for doctors around the country at this stage of the pandemic, there was no statistical significance between either the 2.4 gram or 8.0 gram arm of the study compared to the placebo group. Just three people in each of the antibody groups versus six people in the placebo group required any sort of medical care, including telemedicine, primary care, urgent care, emergency room or hospitalization. It should also be noted that so far both the low and high dose regimens have demonstrated good safety profiles.

As this study was conducted in the outpatient setting—that is, those who were not yet sick enough to be hospitalized—the question of whether or not the antibody cocktail can prevent progression of disease is worthwhile. However, based on these preliminary data, we are unlikely to find an answer to that unless Regeneron plans to enroll nearly 1500 antibody-negative patients in a larger trial assessing progression of disease in mild covid-19.

For now, there is no reason for physicians to recommend this therapy outside of the clinical trial setting. Nevertheless, we expect more interesting data to come from the ongoing trial, as the authors suggest the increased viral clearance could ultimately demonstrate improved outcomes. Any effect on whether cocktails like this one (including similar ones made by Eli Lilly) might modify how contagious the virus is has also not been studied. Determining this would require contact tracing, something that few clinical trials have attempted to achieve.

—Cedric Dark, MD MPH

POLICY BRIEFING

Approaching consensus on a stimulus package.

After a series of false starts, Congress appears to have [cleared](#) another hurdle on the path to the next round of stimulus funding. The conflict this time revolved around emergency lending abilities created under CARES Act for the Federal Reserve. Under this program, \$454 billion was allocated for use, but to date only \$195 billion has been dispersed. This unused pool has been a partisan flashpoint, with Republicans [moving](#) to use these funds to replenish programs like the Paycheck Protection Program.

While the details have not been released, it appears that the compromise has resulted in at least a portion of these funds going to small businesses in addition to \$600 direct payments to qualifying citizens and \$300 in weekly federal unemployment benefits. Overnight, details of a compromise surfaced which suggested that the package also includes benefits for large and relatively wealthy organization tacked on to it, such as the Catholic Church, which now appears set to [receive](#) \$1.4 billion in taxpayer-backed aid. *Various.*

—*Brief19 Policy Team*

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